SUPPORT FOR THE AMENDMENTS

The amendments to the claims are supported throughout the specification, particularly at pages 2-13. No new matter is believed to be added by entry of the amended and new claims. Claims 1-6 and 8-21 are active.

REMARKS

Applicants would like to thank the Examiner for the helpful and courteous interview held with Applicants' representative on January 22, 2003. During the discussion, Applicants pointed out that Steuerle fails to describe a cationic polymer according to the claimed invention, in which compound (b) has at least two functional groups selected from halohydrin, epoxy, chloroformate, isocyanate, or halogen, or having any of the structures of formulae (IV)-(IX).

The rejections of the claims under 35 U.S.C. § 102(b) or § 103(a) over Steuerle are respectfully traversed. Steurle describes "water-soluble, amino-containing condensates" prepared by reacting various polyamines with crosslinking agents containing at least two functional groups (column 2, line 60 to column 3, line 23). Steuerle indicates that these crosslinking agents may include bischlorohydrin or bisglycidyl ethers of polyalkylene glycols (column 5, lines 44-46), dichloroalkanes, blocked diisocyanates (column 6, lines 9-24) and alkylene dicarboxylic acids, salts, diesters, and diamides (column 7, lines 4-24). However, Steuerle fails to describe difunctional compounds having a halohydrin, epoxy, chloroformate, isocyanate or halogen group, as in the claimed invention. Moreover, Steuerle fails to describe a cationic polymer in which the crosslinking group has the structure of the compounds of formula (IV)-(IX) of the claimed invention. Thus, Steuerle describes a different modified cationic polymer. Accordingly, Steuerle fails to anticipate the claimed modified cationic polymer.

The modified cationic polymer of Claim 1 of the present invention is prepared by reacting a water-soluble polymeric compound (a) with a compound (b) which is at least bi-functional with respect to the NH groups of compound (a), and where the functional groups are selected from a halohydrin, epoxy, chloroformate, isocyanate, or halogen. These functional groups are different from those of Steuerle, and would reasonably be expected to react in a different manner, and upon reaction with a NH group, form a different functional group. Since different functional groups have different properties (e.g., water-solubility), the modified cationic polymers of Claim 1 would be expected to have different properties compared to those of Steuerle. Moreover, none of the crosslinking agents of Steuerle have a structure corresponding to compounds of formulae (IV)-(IX) of the claimed invention, and also lack a group "R" which is a C_8-C_{30} alkyl or alkenyl group. Since the structure of a crosslinking agent, and the presence of alkyl or alkenyl groups "R" would reasonably be expected to affect the solubility and other properties of the cationic polymer, the cationic polymers of the claimed invention, in which the compound (b) is a compound of formulae (IV)-(IX), would also be expected to significantly different from the compounds of Steuerle. Accordingly, Steuerle fails to suggest the claimed modified cationic polymer.

Accordingly, and for the reasons stated above, Applicants respectfully request withdrawal of the rejections. Applicants respectfully submit that the present application in now in condition for allowance, and early notification thereof is earnestly solicited.

Respectfully submitted,

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Marked-Up Copy
Serial No: 09/807,996
Amendment Filed on: HEREWITH

IN THE CLAIMS

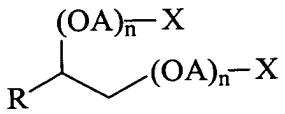
1. (Amended) A modified cationic polymer [which is obtainable] prepared by reacting a water-soluble, polymeric compound[s] containing NH groups and selected from the group consisting of [the] polyalkylenepolyamines, polyamidoamines, polyamidoamines grafted with ethyleneimine and polymers containing vinylamine units with

a compound[s] which [are] is at least bifunctional with respect to NH groups and contains at least one alkyl or alkylene radical of at least 8 carbon atoms and, [as] has a functional group selected from the group consisting of[,] a halohydrin, epoxy, [carboxyl,] chloroformate, [or] isocyanate group [or] and a halogen atom.

3. (Twice Amended) [A] The modified cationic polymer of Claim 1 prepared by reacting [as claimed in Claim 1, wherein]

(a) polyethyleneimines, polyamidoamines, polyamidoamines, polyamidoamines grafted with ethyleneimine, polymers containing vinylamine units or mixtures thereof [are reacted] with

(b) at least one compound of the formula



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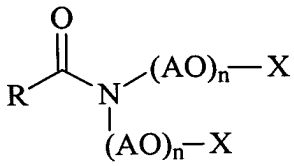


(IV) (V)

where R is a C_8- to C_{30}-alkyl or alkenyl, A is C_2- to C_4-alkylene, n is 0-50 and X is a halohydrin, epoxy, carboxyl, chloroformate or isocyanate group or a halogen atom.

4. (Twice Amended) A process for [the preparation of a] preparing the modified cationic polymer [as claimed in claim] of Claim 1, comprising reacting: [wherein]

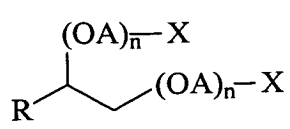
(a) a water-soluble, polymeric compound[s] containing NH groups and selected from the group consisting of [the] polyalkylenepolyamines, polyamidoamines, polyamidoamines grafted with ethyleneimine and polymers containing vinylamine units [are reacted] with

(b) at least one compound[s] which [are] is at least bifunctional with respect to NH groups and contains at least one alkyl or alkylene radical of at least 8 carbon atoms and, as functional group, a halohydrin, epoxy, [carboxyl,] chloroformate or isocyanate group or a halogen atom.

6. (Twice Amended) A process [as claimed in claim 4, wherein] for preparing modified cationic polymers comprising reacting:

(a) compounds containing NH groups and selected from the group consisting of [the] polyalkylenepolyamines, polyamidoamines, polyamidoamines, polyamidoamines grafted with ethyleneimine and polymers containing vinylamine units [are reacted] with

(b) at least one compound of the formula



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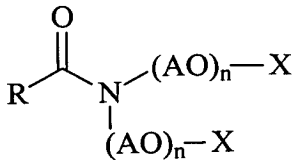

(IV) (V)

wherein R is a C_8- to C_{30}-alkyl or alkenyl, A is C_2- to C_4-alkylene, n is 0-50 and X is a halohydrin, epoxy, carboxyl, chloroformate or isocyanate group or a halogen atom.

8-21. (New).--